# TABLE OF CONTENTS

#### PREFACE ADRC AESTHETIC DESIGN GUIDELINES SUMMARY

#### CHAPTER 1 INTRODUCTION

1-1	Report	Purpose
-----	--------	---------

- 1-2 Project Purpose
- 1-3 Existing Conditions
- 1-4 Community Involvement
- 1-5 Aesthetic Design Process
- 1-6 Design Elements
- 1-7 Conclusion

#### CHAPTER 2 BRIDGES AND STRUCTURES

- 2.1 Definitions
- 2.2 Bridge Design Guidelines
- 2.3 General Elevations
- 2.4 Substructure Design
- 2.5 Piers
- 2.6 Abutments
- 2.7 Superstructure Design
- 2.8 Structure Type
- 2.9 Railing System
- 2.10 Concrete Railings
- 2.11 Metal Railings
- 2.12 Pedestrian Bridges
- 2.13 Concrete Surface Treatment
- 2.14 Architectural Finishing Treatment
- 2.15 Painting and Finishing

#### CHAPTER 3 RETAINING WALLS

- 3.1 Alignment and Profile
- 3.2 Type
- 3.3 Size
- 3.4 Traffic Barrier
- 3.5 Architectural Finishing Treatment

### 3.6 Painting and Finishing

## CHAPTER 4 NOISE WALLS

- 4.1 Type
- 4.2 System Design
- 4.3 Alignment
- 4.4 Profile
- 4.5 Height
- 4.6 Fire Hose Access
- 4.7 Painting and Finishing

#### CHAPTER 5 GRADING

- 5.1 Blending
- 5.2 Interchanges
- 5.3 Earth Berms
- 5.4 Soils

#### CHAPTER 6 SIGNING

- 6.1 Design Approach
- 6.2 Support Structures
- 6.3 Location
- 6.4 Panel Size
- 6.5 Sign Lighting
- 6.6 Relationship to Planting
- 6.7 Traffic Management System Devices
- 6.8 Painting and Finishing

#### CHAPTER 7 LIGHTING

- 7.1 Design Standards
- 7.2 Pole and Fixture Type
- 7.3 Bridge Lighting
- 7.4 Painting and Finishing

#### CHAPTER 8 LANDSCAPING

- 8.1 Design Approach
- 8.2 Existing Vegetation
- 8.3 Plant Types
- 8.4 Plant Size
- 8.5 Plant Selection
- 8.6 Vine PLanting
- 8.7 Interchange Planting

	8.10	Street Tree PLanting Noise Barrier Planting Median Planting Seeding and Sodding	
CHAPTER 9	TRAFFIC BARRIERS		
	9.1 9.2 9.3	Design Considerations Crash Cushions Painting and Finishing	
CHAPTER 10	FENCING		
		Fencing Design Railing Design	
CHAPTER 11	STORM WATER PONDS		
CHAPTER 12	TRANSIT FACILITIES		
		Design Approach Accessibility	
CHAPTER 13	PEDESTRIAN AND BICYCLE FACILITIES		
	13.2 13.3	Design Criteria Alignment Grades Accessibility	

CHAPTER 14 APPENDIX

# **APPENDIX**

#### **DRAWINGS AND DETAILS**

- 19th Street NW over TH52 (Bridge No. 55043)
- 2<sup>nd</sup> Street SW over TH52 (Bridge No. 55051)
- 6<sup>th</sup> Street SW over TH52 (Bridge No. 55052)
- Sight Line Study
- Architectural Wall Treatment Details (Flood Control Project)
- Fire Hose Access Sign Layout

#### **DESIGN VISUALIZATIONS**

- 19<sup>th</sup> Street NW over TH52 (Bridge No. 55043)
- 2<sup>nd</sup> Street SW over TH52 (Bridge No. 55051)

#### SAMPLE SPECIFICATIONS

• Available upon request. Contact Gary Mueller at (651) 296-2303 or Dave Hall at (651) 747-2174.

This document is available in alternative formats to individuals with disabilities by calling (651) 296-2303 or through the Minnesota Relay Service at 1-800-627-3529.

# LIST OF FIGURES

CHAPTER 1	INTRODUCTION		
	Figure 1-1	Project Location	
	Figure 1-2	Existing Visual Character of the Highway Corridor	
	Figure 1-3	Factors to consider in the Aesthetic Design Process	
	Figure 1-4	Aesthetic Committee Considerations	
CHAPTER 2	BRIDGES AND STRUCTURES		
	Figure 2-1	Special Design Treatment	
	Figure 2-2	Corridor Bridge Structures	
	Figure 2-3	Corridor Bridge Structures	
	Figure 2-4	Corridor Bridge Structures	
	Figure 2-5	Overcrossing Bridges	
	Figure 2-6	Undercrossing Bridges	
	Figure 2-7	Pedestrian Bridges	
	Figure 2-8	Bridge Elevation	
	Figure 2-9	Bridge Elevation	
	Figure 2-9a	Bridge Elevation	
	Figure 2-10	Bridge Elevation	
	Figure 2-10a	Bridge Elevation	
	Figure 2-11	Bridge Elevation	
	Figure 2-12	Bridge Elevation	
	Figure 2-13	Bridge Elevation	
	Figure 2-14	Pier Design	
	Figure 2-15	Pier Design	
	Figure 2-16	Pier Design	
	Figure 2-17	Abutment Design	
	Figure 2-18	Abutment Design	
	Figure 2-18a	Abutment Design	
	Figure 2-19	Pilaster Details	
	Figure 2-20	Abutment Design	
	Figure 2-21	Abutment Design	
	Figure 2-22	Traffic Barrier Design	
	Figure 2-23	Traffic Barrier Design	
	Figure 2-24	Metal Railing Design	

	Figure 2-25	Metal Railing Design	
	Figure 2-26	Pedestrian Bridge	
	Figure 2-26a		
	Figure 2-27	Concrete Surface Treatment	
	Figure 2-28	Concrete Surface Treatment	
	Figure 2-29	Slope Paving	
	Figure 2-30	Design Inspiration	
	Figure 2-31	Architectural Finishing Treatment	
	Figure 2-32	Design Theme Colors	
CHAPTER 3	RETAINING WALLS		
	Figure 3-1	Design Visualization	
	Figure 3-2	Retaining Wall Design	
	Figure 3-2a	Retaining Wall Design	
	Figure 3-3	Vine Planter	
	Figure 3-4	Vine Planter Locations	
	Figure 3-4a	Vine Planter Locations	
	Figure 3-5	Architectural Finishing Treatment	
CHAPTER 4	NOISE WALLS		
	Figure 4-1	Noise Mitigation Options	
	Figure 4-2	Wood Noise Barriers	
	Figure 4-3	Wood Noise Barrier Design	
	Figure 4-4	Unit Masonry Noise Barriers	
	Figure 4-5	Unit Masonry Noise Barrier Design	
	Figure 4-6	Unit Masonry Design Details	
	Figure 4-7	Unit Masonry Noise Barrier Design	
	Figure 4-8	Construction Materials	
	Figure 4-9	Design Visualization	
	Figure 4-10	Design Visualization	
	Figure 4-11	Design Visualization	
CHAPTER 5	GRADING		
	Figure 5-1	Grading Design	
	Figure 5-2	Grading Forms	
CHAPTER 6	SIGNING		
	Figure 6-1	Signing Support Structures	
	Figure 6-2	Sign Panel Placement	
CHAPTER 7	LIGHTING		

	Figure 7-1	Roadway Lighting Units	
	Figure 7-2	Architectural Lighting Concept	
	Figure 7-3	Design Visualization (Day)	
	Figure 7-4	Design Visualization (Night)	
CHAPTER 8	LANDSCAPING		
	Figure 8-1	Typical Landscape Treatment Type B	
	Figure 8-2	Typical Landscape Treatment Type C	
	Figure 8-3	Typical Landscape Treatment Type E	
	Figure 8-4	Typical Landscape Treatment Type G	
	Figure 8-5	Typical Landscape Treatment Type H	
	Figure 8-6	Typical Landscape Treatment Type I	
	Figure 8-7	Typical Landscape Treatment Type J	
	Figure 8-8	Typical Landscape Treatment Type M	
	Figure 8-9	Typical Landscape Treatment Type J, L & M	
	Figure 8-10	Typical Landscape Treatment Type J, O & Q	
	Figure 8-11	Typical Landscape Treatment Type S	
	Figure 8-12	Typical Landscape Treatment Type O	
	Figure 8-13	Typical Landscape Treatment Type P	
	Figure 8-14	Typical Landscape Treatment Type Q	
	Figure 8-15	Typical Landscape Treatment Application	
	Figure 8-16	Design Inspiration	
	Figure 8-17	Vine Planter Trellis	
	Figure 8-18	Design Visualization	
	Figure 8-18a	_	
	Figure 8-19	Design Concept	
	Figure 8-20	Design Visualization	
	Figure 8-21	Existing Visual Character	
	Figure 8-22 Figure 8-23	Street Tree Planting Median Planting	
	C		
CHAPTER 9	TRAFFIC BARRIER		
	Figure 9-1	E	
	Figure 9-2		
	Figure 9-3	Terminal Crash Cushions	
CHAPTER 10	FENCING		
	Figure 10-1	Fencing Details	
	Figure 10-2		
	Figure 10-3		
	Figure 10-4		

# CHAPTER 11 STORM WATER PONDS

Figure 11-1 Pond Value Figure 11-2 Pond Grading

# CHAPTER 12 TRANSIT FACILITIES

Figure 12-1 Facility Design

# CHAPTER 13 PEDESTRIAN AND BICYCLE FACILITIES

Figure 13-1 Multiple-Use Bicycle Trails

# CHAPTER 14 APPENDIX